

VOZNESENSKIY, V.D.; MIKHNEVICH, I.P.; NENASHEV, Yu.P.; NILOVA, N.V.

Structural unconformity in Upper Silurian sediments of the Zhaman-Sarysu anticlinorium in central Kazakhstan. Izv. AN Kazakh. SSR. Ser. geol. nauk no.5:55-59 '63. (MIRA 17:1)

1. Tsentral'no-Kazakhstanoye geologicheskoye upravleniye, Karaganda.

Voznesenskiy, V.I.

53-4-9/10

## AUTHORS:

Voznesenskiy, V.I., Korotkikh, N.V.,  
Chernetskiy, A.V., Koporskiy A.S.

Recording

## TITLE:

Oscillographical Tubes for/Rapidly Occurring Processes (Ostsil-  
lograficheskiye trubki dlya zapisi bystroprotekayushchikh pro-  
tsessov)

## PERIODICAL:

Uspekhi Fiz. Nauk, 1957, Vol. 62, Nr 4, pp. 497-522 (USSR)

## ABSTRACT:

The present survey comprises the last decade; it comprises the main methods of oscillographics of processes taking place rapidly and also some characteristic problems on rapidly acting electron-beam tubes (for instance for the production of a thin electron-beam post-acceleration, etc.). The survey is arranged as follows: 1: The methods of velocity oscilloscopy. The deflecting systems, the limitations of the usual deflecting systems for high frequency. 2: The electron beam tubes with deflecting system in form of a line with two conductors. 3: The electron beam tubes for the investigation of phenomena taking place rapidly with high efficiency. 4: Microoscillographical tubes. 5: Tubes with a reflecting system for a travelling wave. 6: The investigation of the ultrashort electronic blobs. 7: The diameter of the spot. 8: The velocity of registration. 9: The dependence of brightness on current density and on the accelerated voltage. 10: The contrast.

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## Oscillographical Tubes for Recording Rapidly Occurring Processes 53-4-9/10

11: Photography. Summarized survey: Up to now the width of the band of the frequencies to be investigated was increased to 10000 megacycles. Tubes with such a band permit the investigation of processes of a duration of  $10^{-9}$  sec. Most of the tubes have a good resolving power. The signal to be resolved must have at least 1 V. The registration velocity of  $10^{10}$  cm/sec obtained for some tubes is in fact a realizable value for serial devices. Frequency distortions in deflecting systems, however, hitherto prevented the sufficiently accurate investigation of those transition processes the spectra of which exceeded 1000 megacycles. At present oscillographical tubes are needed by means of which transition processes of a duration of from  $10^{-9}$  to  $5 \cdot 10^{-11}$  sec and with amplitudes of some tenths of a volt can be investigated. Accordingly, improvements of the frequency characteristic of the deviations and the resolving power of the oscillographic tubes has to be aimed at when developing new tubes. There are 19 figures, 3 tables and 55 references, 13 of which are Slavic.

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VOZNESENSKIY, V.I.

## AUTHORS:

Konorskiy, A. S., Chernetskiy, A. V., Korotkikh, N. V., 53-4-6/11  
Voznesenskiy, V. I.

## TITLE:

The Electronic Methods of the Production of Ultrashort Pulses  
(Elektronnyye metody generatsii sverkhkorotkikh impul'sov).

## PERIODICAL:

Uspekhi Fizicheskikh Nauk, 1957, Vol. 63, Nr 4, pp. 801-812 (USSR).

## ABSTRACT:

The present survey is arranged as follows: Introduction, the problems occurring in connection with the production of pulses by electronic methods (destruction of a "packet"; excitation of the output device), the pulse generator of the klystron type, a tube with transversal deflection of the beam as generator for very short pulses, the combined generator, a pulse generator with magnetic deceleration; summary. The electron generators have a good future. Their main advantages are simplicity, stable operation, the possibility of producing very short pulses in a wide range of frequency. The fact that at present these devices are only rarely used may be explained by the novelty of the methods of electronic pulse production. They are still not known to a wide circle of specialists. Besides, the generators used at present are mostly of low efficiency and their applicability is limited. However, the development of the methods discussed here as well as of that

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The Electronic Methods of the Production of Ultrashort Pulses. 53-4-6/11

of methods still to come opens up new possibilities for pulse  
technics.

There are 7 figures, 1 table, and 9 references, 3 of which are  
Slavic.

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GEKKER, Ivan Romanovich; YUR'YEV, Valentin Ivanovich; VOZNESENSKIY,  
V.I., red.; VORONIN, K.P., tekhn. red.

[Submillimeter waves] Submillimetrovye volny. Moskva, Gos.  
energ.izd-vo, 1961. 63 p. (MIRA 14:12)  
(Microwaves) (Radio)

24/7/2  
S/725/61/000/003/003/008

AUTHORS: Voznesenskiy, V.I., Chernetskiy, A.V., Serebriyskiy, I.N.

TITLE: The blurring of electron clusters due to Coulomb forces under the compensating effect of an initial velocity modulation.

SOURCE: Nekotoryye voprosy tekhniki fizicheskogo eksperimenta pri issledovanii gazovogo razryada; nauchno-tehnicheskiy sbornik, no.3. A.V. Chernetskiy & L.G. Lomize, eds. Moscow, Gosatomizdat, 1961, 53-59.

TEXT: This theoretical analysis of the changes occurring in short freely-moving electron clusters - whether monochromatic or initially velocity-scattered - is of value in the generation of electron clusters for the creation of ultra-short ( $10^{-9}$  to  $10^{-12}$  sec) pulse voltages with great iteration frequency, attaining hundreds of mcps, which is useful in the generation of electromagnetic waves, in accelerator design, etc. It is important to know how rapidly the electron clusters will blur under the effect of their own space charge and to try to find a method for their conservation over a relatively long distance. Short-wave generation by means of the Vavilov-Cherenkov effect and transient or bremsstrahlen radiation (for non-relativistic beams) can produce a noticeable effect only if this problem is overcome. The Coulomb-force-produced blurring of electron clusters was investigated by

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The blurring of electron clusters...

G. I. Zhileyko (ZhTF, v. 31, no. 4, 1961, 508) for spherically shaped clusters, and the repulsive forces were found to be exceedingly significant for small cluster sizes. The present study examines the blurring of cylindrically-shaped clusters; in this case the repulsive forces are found to be not overly great and are, in any event, finite even for infinitely small longitudinal cluster dimensions (for a given transverse size). The change of the spatial density of the cluster in the course of its motion is accounted for approximately. It is shown that the shape of a cluster may be regarded as invariable, so long as the longitudinal cluster dimension is considerably smaller than the transverse dimensions. For short cluster "durations" (ratios of the longitudinal dimension by its mean velocity),  $10^{-11}$  to  $10^{-12}$  sec, this requirement is satisfied (e.g., if  $v = 5 \cdot 10^9$  cm/sec, the cluster length is  $5 \cdot 10^{-2}$  to  $5 \cdot 10^{-3}$  cm with a diameter of a few mm). The influence of the metallic or dielectric walls is disregarded. This is justified for most practical applications, namely, in linear accelerators, electronic ultra-short pulse generators, etc., where the tube diameter is fairly large. The calculation comprises the determination of the longitudinal size of a cluster as a function of the space-charge density (assumed to be uniformly distributed over the cluster), the time, and the magnitude of the initial velocity scatter; the radial spread is assumed to be counteracted by a magnetic field. Cylindrical coordinates are used, with the origin at the center of the cluster. The calculation (and graphic representation) of the timewise change of the longitudinal dimensions of the cluster shows that, when the initial relative velocity is

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The blurring of electron clusters...

S/725/61/000/003/003/006

nonzero, the cluster initially shrinks to a certain minimal length and then begins to blur out. This approximate calculation shows that a cylindrical cluster of practically very small dimensions is, in principle, achievable, since the repulsive force remains finite. A comparison of the cases in which the initial relative velocity is zero and nonzero, respectively, shows that an initial velocity modulation serves to lengthen the distance over which the cluster is conserved. There are 2 figures and 6 references, including 3 recent Soviet references (Koporskiy, A.S., et al., Zap. fiz. nauk, 1957, 60!; Zhileyko, G.I., Cand. Diss., Inst. Radioelektr., Akad. SSSR, 1959, and ZhTF, v. 31, no. 4, 1961, 508) and 3 earlier English-language references (Enslein, Rev. Sci. Instrum., v. 25, 1954, 574; Hastid, D., Phys. (sic!) Soc., Proc., v. 60, 1948, 340; and Grant, E., et al., J. Appl. Phys., v. 25, 1954, 574).

ASSOCIATION: None given.

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VOZNESENSKIY, V.L.

VOZNESENSKIY, V. L...and I.YA. Bobrov.....Vladimirskii Krai; obzor narodnogo khoziaistva Vladimirskei gub. Vladimir, 1928. 147 p. (Vladimirskii gubernskii otdel narodnogo obrazovaniia.)  
"Spisok ispol'zovannoi literatury": p. (143)

DLC: DK511.V6V69

SO: LC, Soviet Geography, Part II, 1951/Unclassified

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001961210006-5

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001961210006-5"

VOZNESENSKIY, V.L., NOSENKO, B.M., STARODUBTSEV, S.V.

"Reaction Depth of an Ionic Stream on a Crystal" Dokl. AN UZ SSR,  
No 8, 1954, 9-14

A method of determining the penetration depth of an ionic stream was suggested by using the properties of weakened luminescence in the crystallophor layer deteriorated by ionic penetration. Zn SiO<sub>4</sub> Mn was studied. The initial behavior of luminescence curves under electron excitation shows that no sharp boundary of the deterioration layer exists. The relation of penetration depth to ion energy is nearly linear and only slightly depends on the type of ions. (RZhFiz, No 11, 1955)

Voznesenskiy, V.

ZALENSKIY, O.V.; SEMIKHATOVA, O.A.; VOZNESENSKIY, V.L.; KONOVALOV, I.N.,  
redaktor; YAKOVLEVA, V.M., redaktor; KARYAKIN, A.V., redaktor;  
ABOVS, R.A., tekhnicheskiy redaktor.

[Using radioactive carbon C<sup>14</sup> in the study of photosynthesis]  
Metody premenenija radioaktivnogo ugleroda C<sup>14</sup> dlia izuchenija  
otosinteza. Moskva, Izd-vo Akademii nauk SSSR, 1955. 88 p.  
(Photosynthesis) (MLRA 8:11)  
(Carbon-isotopes)

VODNESENSKIY, V. L.

Temperature influence on the metabolism of carbon-14 absorbed in the process of photosynthesis. O. V. Zaitsev, V. I. Vodnenskiy, M. M. Ponomareva, and T. P. Slobodko (Institute Biol. Sta., Acad. Sci. Tadzhik. S.S.R.). Zh. fiz. chim. 40, 117-126 (1966). Barley seedlings exposed to  $^{14}\text{CO}_2$  at 40, 33, 26°C. released the C at different rates during respiration during the first hrs. after exposure. The rate of photosynthesis was also measured. With

time, the speed of C assimilation slowed down. The quantity of C in the root system increased rapidly during the first hrs. after photosynthesis ceased, and after that the quantity leveled off to a const. Lowered temps. at the same time photo-synthesis tests retarded the utilization of C by the plant. In H<sub>2</sub>O and air-sol compds. there was a decrease in C in the leaves of those plants which had been exposed to  $^{14}\text{CO}_2$ . At the same time, the C in the plant's "clean fraction" and the cellulose decreased. At the same time, lower temps. activate the plant's respiration. At the same time, the plant's C from the leaves into the roots increased. The authors conclude that the C in the plant's roots is used for protein synthesis. J. S. Joffe

VOZNESENSKIY, V.L.

Quantitative measurements on the intensity of photosynthesis with the aid of the radioactive isotope of carbon-14.  
V. L. Voznesenskiy (V. L. Komarov, Botan. Inst., Leningrad).  
Botan. Zhar. 40, 402-8(1955).—Detailed descriptions and photographs are presented of an app. constructed for the detn. of CO<sub>2</sub> absorption in the process of photosynthesis. Results of expts. are discussed at length and a formula is derived for calcg. the intensity of photosynthesis. J. S. Jaffe

ZALENSKIY, O. V., SEMIKHATOVA, O. A., and VOZNESENSKIY, V. L.

"Quantitative Methods of Investigation of Photosynthesis with the Aid  
of Radioactive Carbon."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic  
Energy, Geneva, 1 - 13 Sep 58.

V. N. ESENSKY, V.L.

PAGE : WORK EXPERTISE 507/213

(1) International Conference on the Peaceful Uses of Atomic Energy. 2nd, Moscow, 1958.

Editor: Soviet Academy of Sciences; publisher: 1 International Isotope (Reports of Soviet Scientists Production and Application of Isotopes) Moscow, Academy, 1959. 368 p. (series: Isi; freq., vol. 6) 8,000 copies printed.

Editor: (Title page); G.I. Borikov, Corresponding Member, USSR Academy of Sciences; Ed. (inside back); D.B. Andreyevich, Prof. Member, USSR Academy of Sciences; I.I. Borikov, Corresponding Member, M.S.; D.B. Andreyevich.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and undergraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

CONTENTS: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 29 reports on: 1) modern methods for the production of stable radioactive isotopes and their labeled compounds; 2) research principles obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by G.V. Savitskii, Candidate of Medical Sciences, T.J. Prudakov, Candidate of Chemical Sciences and V.V. Selkov, Candidate of Medical Sciences. See Sov/213 for titles or volumes of the set. References appear at the end of the articles.

16. Borikov, A.I., V.I. Karpov, and V.I. Smirnov. Cobalt Sources of High Intensity for Radiative Action (Report No. 234)
17. Chavrov, I.G., Ye. Ye. Korolev, and V.I. Popov. Gamma Radiation Dosimetry and Cobalt External Sources (Report No. 268)
18. Aglantsev, L.K., M.A. Pak, V.I. Bochkarov, Yu.D. Grishchenko, S.V. Tumanyan, and L.A. Pecher. System of Radiometric Measurement of Radioactive Samples (Report No. 227)
19. Aglantsev, L.K., V.P. Kartash, V.I. Nitrosov, and V.Y. Indutsky. Application of Raman Spectroscopy Methods to Beta and Gamma-ray Dosimetry (Report No. 250)
20. Borikov, P.I., V.I. Gal'vanskii, and V.G. Rogozov. Instrument for Measuring Small Streams of High-energy Particles (Report No. 208)
21. Gal'vanskii, A.A., V.I. Polikarpov, and V.I. Melnikov. Measuring and Analyzing Air Contamination by Low Concentrations of Aerosol Alpha Emitters (Report No. 210)
22. Zalmanov, O.V., V.I. Voskresenskiy, and G.A. Soshitova. Photosynthesis Studies by Quantitative Radiometric Methods (Report No. 2135)
23. Rabits, Yu.V., and A.V. Smirnov. Studying the Transfer, Distribution, and Transformation of Certain Physiologically Active Compounds in Plants (Report No. 237)
24. Chavrov, I.I., Ye. Ye. Korolev, and A.I. Petrov-Spiridonov. Rayon on Absorption and Secretion in Roots (Report No. 235)
25. Abrosimova, A.N., and V.A. Shestopalova. Effect of the Biospheric Microorganism on the Absorption and Secretion of Phosphorus and Sulfer by the Soilline Roots of Woody Plants (Report No. 2312)
26. Borikov, V.I., and N.B. Protopopov. Absorption of Phosphorus Fractions by Calcium Plants in Relation to Their Resistance to Cold (Report No. 213)
27. Andreyevich, D.B., A.V. Voropoldin, V.A. Nekrasov, and V.V. Dobrovolskii. Some Results of Using Radioactive Isotopes for Plant Protection (Report No. 209)

Allots of Attention and Attention Due to the Radioactive Isotope Method 159

VOZNESENSKIY, V.L.; SEMIKHATOVA, O.A.

Experimental verification of the radiometric method of evaluating  
the rate of photosynthesis. Fiziol.rast. 6 no.3:380-384  
(MIRA 12:8)  
My-Je '59.

1. V.L.Komarov Botanical Institute, Leningrad.  
(Photosynthesis) (Radioactive tracers)

VOZNESENSKIY, V. L. Cand Bio Sci -- (diss) "Comparative characteristics and theoretical bases for the radiometric method of investigating plant photosynthesis," Moscow, 1960, 23 pp, 250 cop.  
(Institute of Plant Physiology im K. A. Timiryazev, AS USSR) (KL, 42-60, 112)

VOZNESENSKIY, V.L.

Determining the photosynthetic rate from changes in the electric conductivity of the absorbing alkali solution [w.s.i.E]. Trudy Bot. inst. Ser.4 no.14:258-283 '60.  
(Photosynthesis) (Conductometric analysis)

VOZNESENSKIY, V.L.

Error occurring in conductometric determination of the intensity  
of photosynthesis. Biofizika 5 no. 6:755-757 '60.  
(MIRA 13:10)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.  
(PHOTOSYNTHESIS) (CONDUCTOMETRIC ANALYSIS)

VOZNESENSKIY, V.L.

Research on gas exchange in plants in the closed systems of C<sup>14</sup>O<sub>2</sub>.  
(MIRA 15:1)  
Biofizika 6 no.6:725-733 '61.

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.  
(PLANTS—RESPIRATION)

DILOV, Kh.V.; FILIPPOVA, L.A.; SHTAN'KO, T.P.; VOZNESENSKIY, V.L.;  
SEMIKHATOVA, O.A.; ZALENSKIY, O.V.

Dark metabolism of organic compounds in barley at different tem-  
peratures. Trudy Bot. inst. Ser. 4 no.15:3-24 '62. (MIRA 15:7)  
(Plants--Metabolism)

SEMIKHATOVA, Ol'ga Aleksandrovna; CHULANOVSKAYA, Mariya Vladimirovna;  
DUMASHEVA, T.M., red.; VOZNESENSKIY, V.L., red.

[Manometric methods for studying respiration and photo-synthesis in plants] Manometricheskie metody izuchenija  
dykhaniija i fotosinteza rastenij. Moskva, Nauka, 1965. 167 p.  
(MIRA 18:11)

VOZNESENSKIY, V.L.

Possibility of studying the gas exchange of plants in closed  
systems with the help of  $\text{C}^{14}\text{O}_2$ . Fiziol.rast. 12 no.4:746-749  
(MIRA 18:12)  
Jl-Ag '65.

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR,  
Leningrad. Submitted May 29, 1964.

I 5257-66 ENT(1) FS(v)-3 DD  
ACC NR: AP5027495

SOURCE CODE: UR/0326/65/012/004/0746/0749

AUTHOR: Voznesenskiy, V. L.

ORG: Botanical Institute im. V. L. Komarov, AN SSSR, Leningrad  
(Botanicheskiy institut AN SSSR)

TITLE: The possibility of studying gas exchange of plants in closed systems by means of carbon-14 labeled carbon dioxide

SOURCE: Fiziologiya rasteniy, v. 12, no. 4, 1965, 746-749

COPIC TAGS: plant metabolism, plant respiration, photosynthesis, carbon dioxide, isotope, test chamber, test method

ABSTRACT: Tests were designed to discover whether data on plant photosynthesis obtained on the basis of CO<sub>2</sub> radioactivity changes corresponds to the apparent photosynthesis, the true photosynthesis, or to none of the usual processes of CO<sub>2</sub> metabolism. In 40 tests, leaves of various plants were placed in a glass container with a counter, optic-acoustic gas analyzers with a selfscriber to measure CO<sub>2</sub> concentration, labeled CO<sub>2</sub>, and lighting equipment. The tests were conducted at room temperature, with a light intensity varying from 3 to 16 thousand lux and an initial CO<sub>2</sub> concentration of 0.5-1%. Results of curve analysis were as follows. In varying tests with high initial CO<sub>2</sub>

DDC: 581.132+581.1.08

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concentration, the specific CO<sub>2</sub> activity remained first constant, then dropped. For small initial CO<sub>2</sub> concentrations, the activity dropped to a constant value as CO<sub>2</sub> assimilation by the plants decreased. No increase of the specific CO<sub>2</sub> activity was observed during the tests in contrast to findings by other authors. This last fact does not mean that no isotope effect exists; it may have been masked. As regards the relationship between CO<sub>2</sub> metabolism and CO<sub>2</sub> concentration, curves for the apparent CO<sub>2</sub> exchange differed from those based on CO<sub>2</sub> radioactivity and also from the true photosynthesis (see Fig. 3). In this system, data were obtained only on the assimilation of CO<sub>2</sub> from an outer medium, without consideration of CO<sub>2</sub> reassimilation. It was concluded that this method yields reliable data on the rate of photosynthesis depending on many external factors (such as light or temperature) at high CO<sub>2</sub> concentrations. At low concentrations for which the rate of photosynthesis depends on CO<sub>2</sub> concentration, radioactive data reflect only the approximate rate of photosynthesis. Depending on the experimental conditions (respiration rate, isotope effect, participation of labeled CO<sub>2</sub> in respiration) the values obtained may be closer to the apparent or to the true photosynthetic rate. In closed systems with illuminated plants the specific activity of CO<sub>2</sub> does not vary linearly with time; hence in the general case the CO<sub>2</sub> liberation rate as a result of respiration cannot be deduced on the basis of decrease in the specific activity, even if isotope effects are neglected. Orig. art. has: 4 figures.

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1-5257-66  
ACC NR: AP5027495

8

Intensity

of gas  
exchange in  
relative  
units

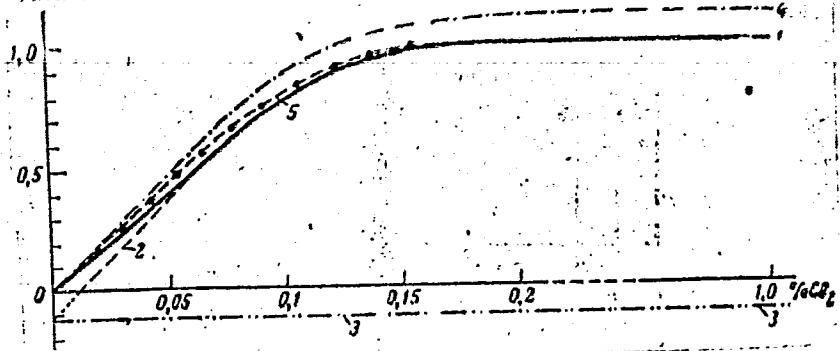


Fig. 3: Curves of intensity of photosynthesis as a function of CO<sub>2</sub> concentration plotted according to data in Fig. 1. 1 - photosynthesis measured by Cl<sup>40</sup>O<sub>2</sub>, 2 - apparent photosynthesis, 3 - respiration, 4 - true photosynthesis, 5 - curve of true photosynthesis (4) brought to the level of curves 1 and 2.

SUB CODE: LS, GC/ SUBM DATE: 29May64/ ORIG REF: 010/ OTH REF: 005

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VOZNESENSKIY, Viktor Leonidovich; ZALENSKIY, Oleg Vyacheslavovich;  
SEMIKHATOVA, Ol'ga Aleksandrovna; Prinimali uchastiye:  
GLAGOLEVA, T.A.; FILIPPOVA, L.A.

[Methods of photosynthesis and respiration studies] Metody  
issledovaniia fotosinteza i dykhaniiia rastenii. Moskva,  
Nauka, 1965. 304 p.  
(MIRA 18:8)

1. Laboratoriya fotosinteza Botanicheskogo instituta im.V.L.  
Komarova AN SSSR (for Glagoleva, Filippova).

VOZNESENSKIY, V.L.

Study of the carbon dioxide gas exchange curves of plants at low  
CO<sub>2</sub> concentrations. Fiziol. rast. 11 no.6:974-977 N-D '64.  
(MIRA 18:2)

I. Komarov Botanical Institute, U.S.S.R. Academy of Sciences,  
Leningrad.

FILIPPOVA, L.A.; VOZNESENSKIY, V.L.; BOGATKINA, V.F.

Use of the products of photosynthesis in respiration. Fiziol.  
(MIRA 17:2)  
rast. 11 no.1:43-48 Ja-F '64.

1. Laboratoriya fotosinteza Botanicheskogo instituta imeni  
V.L. Komarova AN SSSR, Leningrad.

**VOZNESENSKIY, V. P.**

**P. I. Diakonov. Phisrgilia, Moskva, no.9:11-16 Sept. 1950.  
(CML 20:1)**

**1. Obituary.**

VOZNESENSKIY, V.P., gornyy inzh.

Using charges with air spaces in quarries of the Dokuchaev  
flux dolomite combine. Vzryv. delo no.54/11:325-328 '64.  
(MIRA 17:9)

1. Dokuchayevskiy flyuso-dolomitnyy kombinat.

VOZNESENSKIY, V. P.

Bone - Grafting

Case of extensive osteoplasty of the shoulder. Uch.zap.Vt.mosk.med.inst., 2, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

VOZNESENISKIY, V.P.  
TIKHONOV, Z.I.; STEPANOVA, M.N., kandidat meditsinskikh nauk; MESHALKIN, Ye.N.,  
kandidat meditsinskikh nauk; RAKULEV, A.N., professor; GULIAYEV, A.V., pro-  
fessor; VOZNESENISKIY, V.P., professor; DMITRIYEV, I.P., professor; OGAEV,  
B.V., professor; VAZA, D.L., professor; PETROV, B.A., professor, predsed-  
tel'; DOROFEEV, V.I., sekretar'.

Minutes of the session of the Surgical Society of Moscow and Moscow Province  
of June 27, 1952. Khirurgija no.3:84-88 Mr '53. (MTPA 6:6)

1. Khirurgicheskoye obshchestvo Moskvy i Moskovskoy Oblasti.  
(Heart--Surgery) (Cardiovascular system--Surgery)

VOZNESENSKIY, Vladimir Petrovich; IVANOV, Vasiliy Alekseyevich

[Operative surgery and topographic anatomy] Operativnaia khirurgiia  
i topograficheskaiia anatomiia. Moskva, Medgiz, 1959. 470 p.  
(MIRA 13:7)  
(SURGERY, OPERATIVE) (ANATOMY, SURGICAL AND TOPOGRAPHICAL)

BAKULEV, A.N., akad.; BLOKHIN, N.N.; BOGUSH, L.K.; VELIKORETSKIY, A.N., prof.; VOZNESENSKIY, V.P., prof., zasl. deyatel' nauki [deceased]; GULYAYEV, A.V., prof.; DANILOV, I.V., prof.; DUBOV, M.D., doktor med. nauk; KAZANSKIY, V.I., prof.; LINBERG, A.A.; LINBERG, B.E., zasl. deyatel' nauki, prof.; MEDVEDEV, I.A., dots.; MESHALKIN, Ye.N., prof.; MIRONOVICH, N.I., doktor med. nauk; NIKOLAYEV, O.V., prof.; NIFONTOV, B.V., doktor med. nauk; PETROVSKIY, B.V.; PRIOROV, N.N.[deceased]; RIKHTER, G.A., prof.; ROVNOV, A.S., prof.; RUFANOV, I.G.; STRUCHKOV, V.I.; SHRAYBER, M.I., doktor med. nauk; GORELIK, S.L., dots., red.; YELANSKIY, N.N., red.; SALISHCHEV, V.E., zasl. deyatel' nauki, prof.[deceased]; RYBUSHKIN, I.N., red.; BUL'DYAYEV, N.A., tekhn. red.

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Vol.1. 1961. 564 p. (MIRA 14:12)

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Yu.A.; MAKAROV, Yu.K.; MIROSHNIKOV, I.P.; NOVICHENKO, I.P.;  
POPOV, A.V.; SEREBRYAKOV, V.A.; KANEVSKAYA, M.D., red.; ANDRIANOV,  
B.I., tekhn.red.

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a textbook for organizations of the All-Union Voluntary Society for  
the Promotion of the Army, Aviation, and Navy] Zashchita naseleniya  
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I.S., red.; GODINER, F.Ye., red.; SORKIN, M.Z., tekhn. red.

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Popov, and V. A. Serebryakov

Zashchita naseleniya ot sovremennykh sredstv porazheniya; uchebnoye  
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Modern Means of Destruction; Handbook for DOSAAF Organizations)  
2d ed., rev. and enl. Moscow, DOSAAF, 1963. 254 p. 450,000 copies  
printed.

Sponsoring Agency: Vsesoyuznoye ordena krasnogo znameni Dobrovol'noye  
obshchestvo sodeystviya armii, aviatsii i floty.

Eds. (Title page): I. S. Varennikov and L. V. Vinogradov; Compilers: M. D.  
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RYZHOV, A.D., retsenzent; ABELTIN'SH, A.Ya., retsenzent;  
AKIMOVA, L.D., red.; PECHENKINA, O.P., tekhn. red.

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Bogolyubskiy, G. N., I. I. Burlinov, L. V. Vinogradov, V. V. Voznesenskiy,  
V. S. Danilyuk, A. S. Zubkin, A. S. Il'yashov, M. D. Korablev, Yu. A.  
Lebedeva, Yu. K. Makarov, I. P. Miroshnikov, I. P. Novichenko, A. V.  
Popov and V. A. Serebryakov

Zashchita naseleniya ot sovremennykh sredstv porazheniya; uchebnoye  
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Modern Means of Destruction; Handbook for DOSAAF Organizations)  
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printed.

Sponsoring Agency: Vsesoyuznoye ordena krasnogo znameni Dobrovol'noye  
obshchestvo sodeystviya armii, aviatii i floty.

Eds. (Title page): I. S. Varennikov and L. V. Vinogradov; Compilers: M. D.  
Korablev and Yu. A. Lebedeva; Ed.: F. Ye. Godiner; Tech. Ed.: M. Z.  
Sorkin.

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6

Protection of the Population (Cont.)

PURPOSE: This textbook is intended for persons studying civil defense, and is the basic manual for DOSAAF civil-defense instructors.

COVERAGE: This book describes in detail modern aerial mass-destruction weapons and civil defense. It also discusses means of coping with the effects of an attack.

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Ch. I. Modern Aerial Mass-Destruction Weapons	3
Ch. II. Protecting the Population From Modern Mass-Destruction Weapons	65

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Ch. III. Principal Means of Protection From an Air Attack  
(Individual and Collective)

113

Ch. IV. Instructions and Responses to Civil Defense Signals

150

Ch. V. Liquidating the Consequences of an Aerial Attack

173

AVAILABLE: Library of Congress

SUBJECT: Civil Defense

AD/dk/os

7/30/63

bm/CH

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(Machinery industry)  
(Poklad, I. I.)

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SO: U-6472, 18 Nov 1954

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"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001961210006-5

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152 p.

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APPROVED FOR RELEASE: 09/01/2001

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Device for observing phase relationship in stereophonic  
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VOZNESENSKIY, Yu.A.

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VNAIZ no.7:97-103 '60. (MIRA 14:4)  
(Sound—Recording and reproducing) (Phonorecords)

VOZNESENSKLY, Yu A.

A stereophonic sound reproducing system. Trudy VMAIZ no.9:128-134  
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(Stereophonic sound systems)

25555  
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B116/B212

26.2262

AUTHORS: Bondarenko, A. V., Voznesenskiy, Yu. A., Minashin, M. Ye.,  
Sidorova, I. I., Sharapov, V. N.

TITLE: Investigation of the automatic control system for the power  
level of a power reactor

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 8, 1961, 54-62

TEXT: The present paper deals with the calculation of the control system  
of a power reactor. A concrete example is given for the investigation of  
the transient processes for one of the variants of a projected reactor  
having an automatic power control system. A number of questions are dis-  
cussed which are connected with the automatic reactor during non-steady  
operation. The variant mentioned is shown in Fig. 1. The control object  
is built similarly to that of the first atomic power plant in the USSR,  
namely, a heterogeneous uranium-graphite boiling reactor. This reactor has  
an effective neutron life of  $\tau = 4 \cdot 10^{-4}$  sec and a negative temperature  
effect. Fig. 2 shows the cross section of a fuel element in the graphite

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block of the core. Three groups of equations are set up: For the change of neutron density in the reactor in time:

$$\frac{dn}{d\tau} = \frac{k_{\text{eff}}(1-\beta) - 1}{l} n + \sum_{i=1}^6 \lambda_i c_i, \quad (1)$$

$$\frac{dc_i}{d\tau} = -\lambda_i c_i + \frac{k_{\text{eff}} \beta_i}{l} n, \quad (2-7),$$

$$\beta = \sum_{i=1}^6 \beta_i, \quad i = 1, 2, \dots, 6.$$

where  $\tau$  denotes the time,  $n$  the neutron density,  $k_{\text{eff}} = k_{\text{eff}}$ ,  $\lambda_i$  the decay constant of the fragments of the  $i$ -th group of delayed neutrons,  $l$  the effective relative yield of delayed neutrons of the  $i$ -th group (taking into account the production energy),  $c_i$  the effective life of neutrons in the

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reactor. The deviation  $\Delta k = k_{\text{eff}} - 1$  is caused by an external perturbation ( $\Delta k_{\text{perturbation}}$ ) and by a change in reactivity 1) due to the motion of the control rods (automatic controller):  $\Delta k_{\text{AR}}$ , 2) due to the insertion of emergency protection rods into the core:  $\Delta k_{\text{ep}}$ ; and 3) due to the deviation of the uranium, moderator and coolant temperatures:  $\Delta k_t$ .  $\Delta k$  combines additively all of these. The second group of equations expresses the change in time of the determining parameters of the automatic control system. They read:

$$\frac{d\Delta\varphi_1}{d\tau} = k_1[n(\tau) - 1] \quad (8)$$

$$T_{\text{MV}} \frac{d\Delta u}{d\tau} + \Delta u = k_2(\Delta\varphi_1 - k_3 \Delta\varphi_2) \quad (9)$$

$$T_{\text{SW}} \frac{dx}{d\tau} + x = k_4 \Delta u \quad (11),$$

$$\frac{d\Delta\varphi_2}{d\tau} = x \quad (10),$$

$$\Delta k_{\text{AR}} = -k_5 \Delta\varphi_2 \quad (12),$$

where  $n(\tau)$  denotes the relative neutron density;  $\varphi_1$  the angle of rotation;

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of the drive (of the intermediate switch mechanism);  $\varphi_2$  the angle of rotation of the switch mechanism drive;  $u$  the potential at the output of the magnetic amplifier;  $T_{MV}$  the time constant of this amplifier;  $T_{SW}$  the time constant of the switch mechanism;  $k_1, k_2, k_3, k_4, k_5$  denote the transmission coefficients of the control elements. The third group of equations makes it possible to determine the mean change of the uranium temperature ( $\Delta t_u$ ) in the reactor and also the change of  $k_{eff}$  when the uranium temperature changes by  $1^{\circ}\text{C}$  and by  $\Delta t$ , if the temperature coefficient of reactivity ( $\alpha_{temp}$ ) is known. These equations read as follows:

$$\frac{d\Delta t_u^I}{dt} = -0.650 \Delta t_u^I + 0.596 \Delta t_f^I + 8.63 [n(\tau) - 1]; \quad (13)$$

$$\frac{d\Delta t_u^{II}}{dt} = -0.654 \Delta t_u^{II} + 0.600 \Delta t_f^{II} + 16.2 [n(\tau) - 1]; \quad (14)$$

$$\frac{d\Delta t_u^{III}}{dt} = -0.661 \Delta t_u^{III} + 0.607 \Delta t_f^{III} + 20.4 [n(\tau) - 1]; \quad (15)$$

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$$\frac{d\Delta t_u^{IV}}{d\tau} = -1,52\Delta t_u^{IV} + 20,4[n(\tau) - 1]; \quad (16)$$

$$\frac{d\Delta t_f^I}{d\tau} = 1,77\Delta t_u^I - 7,64\Delta t_f^I; \quad (17)$$

$$\frac{d\Delta t_f^{II}}{d\tau} = 1,69\Delta t_u^{II} - 4,99\Delta t_f^{II} + 3,04\Delta t_f^I; \quad (18)$$

$$\frac{d\Delta t_f^{III}}{d\tau} = 1,48\Delta t_u^{III} - 5,67\Delta t_f^{III} + 3,33\Delta t_f^{II} - 0,015\Delta t_f^{III}\Delta t_u^{III}. \quad (19)$$

where  $\Delta t_u$  denotes the deviation of the mean uranium temperature in the cross section of the core in question from a nominal value;  $\Delta t_f$  the deviation of the mean coolant temperature in a certain section (the active zone is divided into several sections with respect to height: I, II, III, IV). It is assumed that the heat removal is concentrated in the layer having radius  $r_3$ , and that the fuel mass will produce an additional thermal resistance. Eqs. (1) - (19) have been investigated with the help of a re-

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actor simulator considering 6 groups of delayed neutrons and with three simulating devices of type NH-7 (MN-7) for work control of reactors. The set of equations is schematically shown in Fig. 3. The following results have been obtained by a study of the automatic controller and reactor for non-steady operation: 1) Representation in one-group approximation results in an excessively high maximum reactivity jump permissible; therefore, 6 groups have been taken. 2) For a discontinuously changing reactivity, the increase of the amplification factor of the automatic controller will first decrease the power excess but will also increase the control time. Increasing the amplification factor by a factor of three will keep the system stable. 3) When the temperature effect ( $Q_t \neq 0$ ) was not taken into account, one obtains  $\Delta k_{perm} = 0.000472$  and a linear dependence of the permissible reactivity jump of  $Q_{temp}$ :  $\delta \Delta k_{perm} / \delta Q_{temp} = 1.45$ . 4) The maximum permissible amplitudes of reactivity pulsation in the range of 0.05 - 0.3 cps, which can be applied to the automatic controller, are given as:  $\Delta k = 0.0002$  at  $Q_t = 0$  and  $\Delta k = 0.000325$  at  $Q_t = -0.67 \cdot 10^{-4}$ . Therefore, the temperature effect has to be determined accurately.

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B116/B212

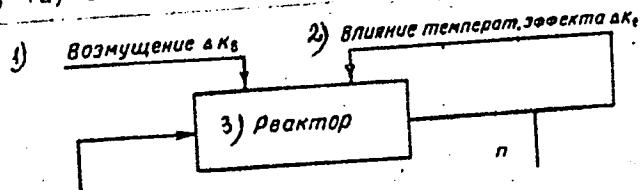
Investigation of the automatic ...

5) Even at resonance frequencies the automatic controller is able to take the pulsation of the coolant amount, and the amplitudes of the corresponding stabilized power fluctuations will be smaller than the permissible maximum. A. K. Krasin, Academician of the AS BSSR, is thanked for interest in this work. There are 5 figures and 2 Soviet-bloc references.

SUBMITTED: April 8, 1961

Fig. 1: Block diagram of the chief components of the automatic control system.

Legend: 1) perturbation; 2) influence of the temperature effect; 3) reactor; 4) control rods; 5) neutron detector; 6) power transmitter; 7) signal amplifier; 8) intermediate switch mechanism; 9) comparator; 10) drive; 11) magnetic amplifier; 12) switch mechanism.



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"APPROVED FOR RELEASE: 09/01/2001

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AKIMOV, V.F.; VOZNESENSKIY, Yu.A.; POPKOV, V.V.

Dynamic properties of a trap-separator as an object of automatic control. Neft. khoz. 42 no.7:52-56 Jl '64. (MIRA 17:8)

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VOZNESENSKIV, Yu.A.

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(ACTH, effects,  
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(CARDIOVASCULAR SYSTEM, eff. of drugs on,  
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(Blast furnaces)

(Gas dynamics)

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VOZNITSKII, I., docent, kand. tehn. nauk

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MALAKHOV, N.D., mekhanik-nastavnik Dal'nevostochnogo pa-  
rokhodstva, retsenzent; NELDOVA, E.S., red.; LAVRENOVA, N.B.,  
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VOZNITSKIY, I., kandidat tekhnicheskikh nauk (Murmansk)

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VOZNJAK, M.

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Uncl.

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Voznovich, P. D.

Okhlazhdeniye metallurgicheskikh pechey vysokotemperaturnymi teplonositelyami  
(Cooling of Metallurgical Furnaces by Means of High-temperature Heat  
Carriers) Moscow, Metallurgizdat, 1959. 228 p. Errata slip inserted.  
3,200 copies printed.

Ed.: S. M. Lukomskiy; Ed. of Publishing House: M. R. Lanovskaya; Tech. Ed.:  
M. K. Attopovich.

PURPOSE: This book is intended for engineers and technicians engaged in designing  
and operating metallurgical or other furnaces and heat exchangers using  
high-temperature heat carriers.

COVERAGE: Possibilities of the secondary utilization of heat as source of energy  
are investigated. Different types of high-temperature organic and inorganic  
heat carriers along with their properties and function in cooling metallurgical  
furnaces are discussed. Results of pilot plant tests carried out to analyze  
the process of cooling shaft furnace jackets using diphenyl mixture are  
analyzed. Various cooling systems using high-temperature heat carriers and  
their operations are described. Problems of heat emission and exchange,

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circulation of heat carriers suitable for cooling furnaces of various types, and the operation of cooling systems are reviewed. Some suggestions on how cooling systems should be operated are offered. The book contains designs, diagrams, tables and formulas. Comments made by V. O. Fogel', Candidate of Technical Sciences, are acknowledged by the author. There are 138 references: 125 Soviet, and 13 English.

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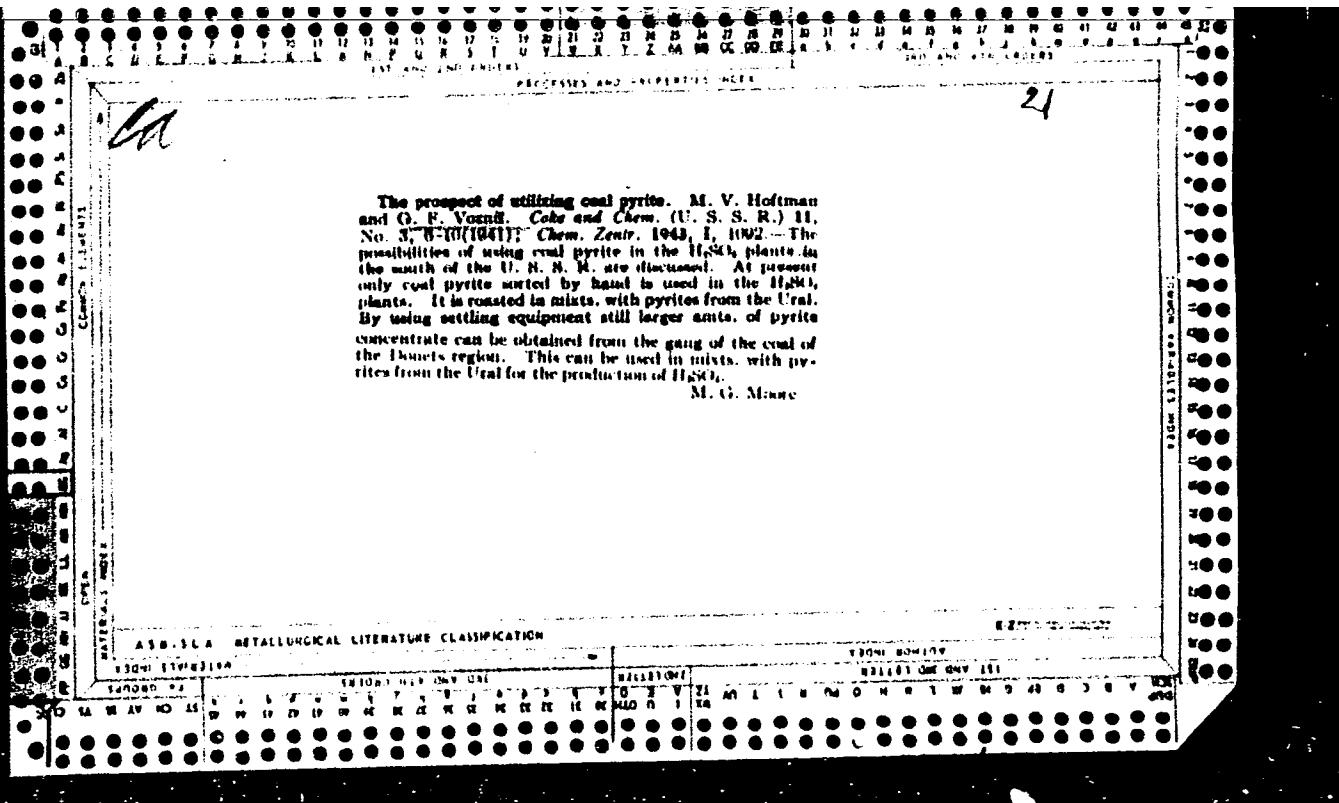
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AUTHOR: Voznyachuk, L. N.

TITLE: The Position of the Boundary of the Last Glaciation in  
Byelorussia (O polozhenii granitsy poslednego oledneniya  
v Belorussii)

PERIODICAL: Uch. zap. Beloruss. un-t, 1986, Nr 28, pp 170-190.

ABSTRACT: The author examines various views concerning the  
boundary of the last glaciation and shows their lack  
of agreement with the present stage of knowledge on  
the Quaternary deposits of Byelorussia. The results of  
a study of the literature and of composite field  
investigations have permitted the author to prepare the  
accompanying map (see Figure). East of Grodno, the  
boundary of the last glaciation extends to the city of  
Sopotskin in the Grodno oblast and south of the town of  
Avgustov (Poland) it joins with the boundary of the  
Paltic (Vistula) glaciation. In the region of the

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